

DERWENT-ACC-NO: 1996-486195

DERWENT-WEEK: 199649

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TITLE: Recovery of polyvinyl butyral from
laminated glass
avoiding physical and chemical
degradation - by crushing
with aid of grinding medium and
simultaneously breaking
down impurities e.g. wood, metal,
rubber to fine powder
followed by washing in surfactants
before drying, and
extrusion to sheet or granulate

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B

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PRIORITY-DATA: 1995DE-1009244 (March 15, 1995)

PATENT-FAMILY:

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DE 19509244 C1		November 7, 1996	N/A
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APPLICATION-DATA:

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DE 19509244C1	N/A	
1995DE-1009244	March 15, 1995	

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ABSTRACTED-PUB-NO: DE 19509244C

BASIC-ABSTRACT:

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Polyvinyl butyral, or comparable polymer sheet, is recycled in this process, in which laminated glass sheets are pre-comminuted by splintering and/or crushing; the adherent glass particles being largely removed. In the new process, the sheets experience impact- and frictional forces from different directions in a grinding medium, until adhesion between the sheets and glass particles is broken down, at the same time pulverising foreign matter present. The mixture is then scrubbed vigorously to remove particles from the sheets, which are then separated and dried. Further size reduction may take place, followed by extrusion of the recovered plastic to a sheet or granulate.

Whilst in the molten state, residual impurities are extracted. Wash fluid from the scrubber is separated from the solids, and re-introduced into the process.

USE - A process to separate and recycle polyvinyl butyral from laminated glass, used e.g. in the vehicle glass- or construction industries.

ADVANTAGE - The process leaves chemical and physical properties of the polyvinyl butyral unaffected, and frees it of glass and of other impurities arising in storage and treatment. Up to 20% of other matter, including wood, plastic, rubber and metal sections are removed. The polymer may be re-used for the same, or other processes. Exceedingly fine powder is produced, with application of only moderate stresses. The powder is in a suitable state for further size redn. if required. The glass particles are not physically worked into the plastic sheet during the process.

CHOSEN-DRAWING: Dwg.1/1

TITLE-TERMS: RECOVER POLYVINYL BUTYRAL LAMINATE GLASS AVOID PHYSICAL CHEMICAL

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DEGRADE CRUSH AID GRIND MEDIUM SIMULTANEOUS
BREAK DOWN IMPURE WOOD
METAL RUBBER FINE POWDER FOLLOW WASHING
SURFACTANT DRY EXTRUDE
SHEET GRANULE

DERWENT-CLASS: A14 A35

CPI-CODES: A10-E02; A10-G01B; A11-B07A; A11-B07C;
A11-C03A; A12-R04; A12-T04A;

ENHANCED-POLYMER-INDEXING:

Polymer Index [1.1]

018 ; P1672 P1865 D01 ; S9999 S1581 ; S9999 S1456*R ;
S9999 S1503

S1456 ; S9999 S1387 ; S9999 S1514 S1456

Polymer Index [1.2]

018 ; ND07 ; N9999 N6906 ; Q9999 Q7658 ; Q9999 Q7818*R
; K9529 K9483

; K9676*R ; N9999 N6155 ; B9999 B5301 B5298 B5276 ;
N9999 N6688

N6655 ; N9999 N6780*R N6655 ; N9999 N6144 ; N9999
N5970*R ; N9999

N6655*R ; B9999 B4535 ; Q9999 Q6826*R ; Q9999 Q9212*R ;
B9999 B5209

B5185 B4740 ; N9999 N5856 ; N9999 N6906

Polymer Index [2.1]

018 ; P0000 ; H0124*R ; K9950

Polymer Index [2.2]

018 ; ND07 ; N9999 N7283 ; Q9999 Q6826*R ; Q9999 Q7658
; Q9999 Q9212*R
; N9999 N6906

SECONDARY-ACC-NO:

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